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FIG 1a

1 ATGTGGGTGACCAAACCTCCTGCCAGCCCTGCTGCTGCAGCATGTCTCCTGCATCTCCTC 60
 TACACCCACTGGTTTGAGGACGGTCGGGACGACGACGTCGTACAGGAGGACGTAGAGGAG
 1 M W V T K L L P A L L L Q H V L L H L L 20
 CTGCTCCCCATCGCCATCCCCTATGCAGAGGGACAAAGGAAAAGAAGAAATACAATTCAT
 61 GACGAGGGGTAGCGGTAGGGGATACGTCTCCCTGTTTCCTTTTCTTCTTTATGTTAAGTA 120
 21 L L P I A I P Y A E G Q R K R R N T I H 40
 GAATTCAAAAAATCAGCAAAGACTACCCTAATCAAAATAGATCCAGCACTGAAGATAAAA
 121 CTTAAGTTTTTTAGTCGTTTCTGATGGGATTAGTTTTATCTAGGTCGTGACTTCTATTTT 180
 41 E F K K S A K T T L I K I D P A L K I K 60
 ACCAAAAAAGTGAATACTGCAGACCAATGTGCTAATAGATGTACTAGGAATAAAGGACTT
 181 TGGTTTTTTTCACTTATGACGTCTGGTTACACGATTATCTACATGATCCTTATTTTCTGAA 240
 61 T K K V N T A D Q C A N R C T R N K G L 80
 CCATTCACTTGCAAGGCTTTTGTGTTTTGATAAAGCAAGAAAACAATGCCTCTGGTTCCCC
 241 GGTAAGTGAACGTTCCGAAAACAAAACTATTTTCGTTCTTTTGTACGGAGACCAAGGGG 300
 81 P F T C K A F V F D K A R K Q C L W F P 100
 TTCAATAGCATGTCAAGTGGAGTGAAAAAAGAATTTGGCCATGAATTTGACCTCTATGAA
 301 AAGTTATCGTACAGTTCACCTCACTTTTTTCTTAAACCGGTACTTAAACTGGAGATACTT 360
 101 F N S M S S G V K K E F G H E F D L Y E 120
 AACAAAGACTACATTAGAAACTGCATCATTGGTAAAGGACGCAGCTACAAGGGAACAGTA
 361 TTGTTTCTGATGTAATCTTTGACGTAGTAACCATTTCCTGCGTCGATGTTCCCTTGTCAT 420
 121 N K D Y I R N C I I G K G R S Y K G T V 140
 TCTATCACTAAGAGTGGCATCAATGTCAGCCCTGGAGTTCATGATACCACACGAACAC
 421 AGATAGTGATTCTCACCGTAGTTTACAGTCGGGACCTCAAGGTACTATGGTGTGCTTGTG 480
 141 S I T K S G I K C Q P W S S M I P H E H 160

(continued)

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481 AGCTATCGGGGTAAAGACCTACAGGAAAACCTACTGTGCAATCCTCGAGGGGAAGAAGGG 540
TCGATAGCCCCATTTCTGGATGTCCTTTTGATGACAGCTTTAGGAGCTCCCCTTCTTCCC

161 S Y R G K D L Q E N Y C R N P R G E E G 180

541 GGACCCTGGTGTTCACAAGCAATCCAGAGGTACGCTACGAAGTCTGTGACATTCCTCAG 600
CCTGGGACCACAAAGTGTTTCGTTAGGTCTCCATGCGATGCTTCAGACACTGTAAGGAGTC

181 G P W C F T S N P E V R Y E V C D I P Q 200

601 TGTTCAGAAGTTGAATGCATGACCTGCAATGGGGAGAGTTATCGAGGTCTCATGGATCAT 660
ACAAGTCTTCAACTTACGTACTGGACGTTACCCCTCTCAATAGCTCCAGAGTACCTAGTA

201 C S E V E C M T C N G E S Y R G L M D H 220

661 ACAGAATCAGGCAAGATTTGTCAGCGCTGGGATCATCAGACACCACACCGGCACAAATTC 720
TGCTTAGTCCGTTCTAAACAGTCGCGACCCTAGTAGTCTGTGGTGTGGCCGTGTTTAAG

221 T E S G K I C Q R W D H Q T P H R H K F 240

721 TTGCCTGAAAGATATCCCGACAAGGGCTTTGATGATAATTATTGCCGCAATCCCGATGGC 780
AACGGACTTTCTATAGGGCTGTTCCCGAACTACTATTAATAACGGCGTTAGGGCTACCG

241 L P E R Y P D K G F D D N Y C R N P D G 260

781 CAGCCGAGGCCATGGTGTCTATACTCTTGACCCTCACACCCGCTGGGAGTACTGTGCAATT 840
GTCGGCTCCGGTACCACGATATGAGAACTGGGAGTGTGGGCGACCCTCATGACACGTTAA

261 Q P R P W C Y T L D P H T R W E Y C A I 280

841 AAAACATGCGCTGACAATACTATGAATGACACTGATGTTCCCTTTGGAAACAACCTGAATGC 900
TTTTGTACGCGACTGTTATGATACTTACTGTGACTACAAGGAAACCTTTGTTGACTTACG

281 K T C A D N T M N D T D V P L E T T E C 300

901 ATCCAAGGTCAAGGAGAAGGCTACAGGGGCACTGTCAATACCATTGGAATGGAATTCCA 960
TAGGTTCCAGTTCCTCTTCCGATGTCCCCGTGACAGTTATGGTAAACCTTACCTTAAGGT

301 I Q G Q G E G Y R G T V N T I W N G I P 320

961 TGTCAGCGTTGGGATTCTCAGTATCCTCAGGAGCATGACATGACTCCTGAAAATTTCAAG 1020
ACAGTCGCAACCCTAAGAGTCATAGGAGTGCTCGTACTGTACTGAGGACTTTTAAAGTTC

321 C Q R W D S Q Y P H E H D M T P E N F K 340

1021 TGCAAGGACCTACGAGAAAATTACTGCCGAAATCCAGATGGGTCTGAATCACCCCTGGTGT 1080
ACGTTCCCTGGATGCTCTTTTAATGACGGCTTTAGGTCTACCCAGACTTAGTGGGACCACA

341 C K D L R E N Y C R N P D G S E S P W C 360

1081 TTTACCACTGATCCAAACATCCGAGTTGGCTACTGCTCCCAAATTCCAAACCTGTGATATG 1140
AAATGGTGACTAGGTTTGTAGGCTCAACCGATGACGAGGGTTTAAGGTTTGACACTATAC

361 F T T D P N I R V G Y C S Q I P N C D M 380

(continued)

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1141 TCACATGGACAAGATTGTTATCGTGGGAATGGCAAAAATTATATGGGCAACTTATCCCAA 1200
 AGTGTACCTGTTCTAACAATAGCACCCCTTACCGTTTTTAATATACCCGTTGAATAGGGTT
 381 S H G Q D C Y R G N G K N Y M G N L S Q 400
 1201 ACAAGATCTGGACTAACATGTTCAATGTGGGACAAGAACATGGAAGACTTACATCGTCAT 1260
 TGGTCTAGACCTGATTGTACAAGTTACACCCTGTTCTTGTACCTTCTGAATGTAGCAGTA
 401 T R S G L T C S M W D K N M E D L H R H 420
 1261 ATCTTCTGGGAACCAGATGCAAGTAAGCTGAATGAGAATTACTGCCGAAATCCAGATGAT 1320
 TAGAAGACCCTTGGTCTACGTTCAATCGACTTACTCTTAATGACGGCTTTAGGTCTACTA
 421 I F W E P D A S K L N E N Y C R N P D D 440
 1321 GACGCTCATGGACCCTGGTGCTACACGGGAATCCACTCATTCCCTTGGGATTATTGCCCT 1380
 CTGCGAGTACCTGGGACCACGATGTGCCCTTTAGGTGAGTAAGGAACCCTAATAACGGGA
 441 D A H G P W C Y T G N P L I P W D Y C P 460
 1381 ATTTCTCGTTGTGAAGGTGATACCACACCTACAATAGTCAATTTAGACCATCCCGTAATA 1440
 TAAAGAGCAACACTTCCACTATGGTGTGGATGTTATCAGTTAAATCTGGTAGGGCATTAT
 461 I S R C E G D T T P T I V N L D H P V I 480
 1441 TCTTGTGCCAAAACGAAACAATTGCGAGTTGTAAATGGGATTCCAACACGAACAAACATA 1500
 AGAACACGGTTTTTGTCTTTGTTAACGCTCAACATTTACCCTAAGGTTGTGCTTGTCTTGTAT
 481 S C A K T K Q L R V V N G I P T R T N I 500
 1501 GGATGGATGGTTAGTTTGAGATACAGAAATAAACATATCTGCGGAGGATCATTGATAAAG 1560
 CCTACCTACCAATCAAACCTCTATGTCTTTATTTGTATAGACGCCTCCTAGTAACCTATTC
 501 G W M V S L R Y R N K H I C G G S L I K 520
 1561 GAGAGTTGGGTTCTTACTGCACGACAGTGTTCCTTCTCGAGACTTGAAAGATTATGAA 1620
 CTCTCAACCCAAGAATGACGTGCTGTCAAAAGGGAAGAGCTCTGAACCTTTCTAATACTT
 521 E S W V L T A R Q C F P S R D L K D Y E 540
 1621 GCTTGGCTTGGGAATTCATGATGTCCACGGAAGAGGAGATGAGAAATGCAAACAGGTTCTC 1680
 CGAACCGAACCTTAAGTACTACAGGTGCCTTCTCCTCTACTCTTTACGTTTGTCCAAGAG
 541 A W L G I H D V H G R G D E K C K Q V L 560
 1681 AATGTTTCCCAGCTGGTATATGGCCCTGAAGGATCAGATCTGGTTTTAATGAAGCTTGCC 1740
 TTACAAAGGGTTCGACCATATACGGGACTTCCTAGTCTAGACCAAAATTACTTCGAACGG
 561 N V S Q L V Y G P E G S D L V L M K L A 580
 1741 AGGCCTGCTGTCCTGGATGATTTTGTAGTACGATTGATTACCTAATTATGGATGCACA 1800
 TCCGGACGACAGGACCTACTAAAACAATCATGCTAACTAAATGGATTAATACCTACGTGT
 581 R P A V L D D F V S T I D L P N Y G C T 600

(continued)

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(continued)

1801 ATTCCTGAAAAGACCAGTTGCAGTGTTTATGGCTGGGGCTACACTGGATTGATCAACTAT 1860
 -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 TAAGGACTTTTCTGGTCAACGTCACAAATACCGACCCCGATGTGACCTAACTAGTTGATA
 601 I P E K T S C S V Y G W G Y T G L I N Y 620

 1861 GATGGCCTATTACGAGTGGCACATCTCTATATAATGGGAAATGAGAAATGCAGCCAGCAT 1920
 -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 CTACCGGATAATGCTCACCGTGTAGAGATATATTACCTTTACTCTTTACGTCGGTCGTA
 621 D G L L R V A H L Y I M G N E K C S Q H 640

 1921 CATCGAGGGAAGGTGACTCTGAATGAGTCTGAAATATGTGCTGGGGCTGAAAAGATTGGA 1980
 -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 GTAGCTCCCTTCCACTGAGACTTACTCAGACTTTATACACGACCCCGACTTTTCTAACCT
 641 H R G K V T L N E S E I C A G A E K I G 660

 1981 TCAGGACCATGTGAGGGGGATTATGGTGGCCCACTTGTTTGTGAGCAACATAAAATGAGA 2040
 -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 AGTCCTGGTACACTCCCCCTAATACCACCGGGTGAACAAACACTCGTTGTATTTTACTCT
 661 S G P C E G D Y G G P L V C E Q H K M R 680

 2041 ATGGTTCTTGGTGTCAATTGTTTCCTGGTCGTGGATGTGCCATTCCAAATCGTCCTGGTATT 2100
 -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 TACCAAGAACCACAGTAACAAGGACCAGCACCTACACGGTAAGGTTTAGCAGGACCATAA
 681 M V L G V I V P G R G C A I P N R P G I 700

 2101 TTTGTCCGAGTAGCATATTATGCAAAATGGATACACAAAATTATTTTAACATATAAGGTA 2160
 -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 AAACAGGCTCATCGTATAATACGTTTTACCTATGTGTTTTAATAAAATTGTATATTCCAT
 701 F V R V A Y Y A K W I H K I I L T Y K V 720

 2161 CCACAGTCATAG 2172
 -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 GGTGTCAGTATC
 721 P Q S * 723

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FIG 1b

1	ATGGGGTGGCTCCCACTCCTGCTGCTTCTGACTCAATGCTTAGGGGTCCCTGGGCAGCGC	60
1	M G W L P L L L L L T Q C L G V P G Q R	20
61	TCGCCATTGAATGACTTCCAAGTGCTCCGGGGCACAGAGCTACAGCACCTGCTACATGCG	120
21	S P L N D F Q V L R G T E L Q H L L H A	40
121	GTGGTGCCCGGGCCTTGGCAGGAGGATGTGGCAGATGCTGAAGAGTGTGCTGGTCGCTGT	180
41	V V P G P W Q E D V A D A E E C A G R C	60
181	GGGCCCTTAATGGACTGCCGGGCCTTCCACTACAACGTGAGCAGCCATGGTTGCCAACTG	240
61	G P L M D C R A F H Y N V S S H G C Q L	80
241	CTGCCATGGACTCAACACTCGCCCCACACGAGGCTGCGGCGTTCTGGGCGCTGTGACCTC	300
81	L P W T Q H S P H T R L R R S G R C D L	100
301	TTCCAGAAGAAAGACTACGTACGGACCTGCATCATGAACAATGGGGTTGGGTACCGGGGC	360
101	F Q K K D Y V R T C I M N N G V G Y R G	120
361	ACCATGGCCACGACCGTGGGTGGCCTGCCCTGCCAGGCTTGGAGCCACAAGTTCCCGAAT	420
121	T M A T T V G G L P C Q A W S H K F P N	140
421	GATCACAAGTACACGCCCACTCTCCGGAATGGCCTGGAAGAGAACTTCTGCCGTAACCTT	480
141	D H K Y T P T L R N G L E E N F C R N P	160

(continued)

(continued)

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481 GATGGCGACCCCGGAGGTCCTTGGTGCTACACAACAGACCCTGCTGTGCGCTTCCAGAGC 540
CTACCGCTGGGGCCTCCAGGAACCACGATGTGTTGTCTGGGACGACACGCGAAGGTCTCG

161 D G D P G G P W C Y T T D P A V R F Q S 180

531 TGCGGCATCAAATCCTGCCGGGAGGCCGCGTGTGTCTGGTGCAATGGCGAGGAATACCGC 600
ACGCCGTAGTTTAGGACGGCCCTCCGGCGCACACAGACCACGTTACCGCTCCTTATGGCG

181 C G I K S C R E A A C V W C N G E E Y R 200

601 GGCGCGGTAGACCGCACGGAGTCAGGGCGCGAGTGCAGCGCTGGGATCTTCAGCACCCG 660
CCGCGCCATCTGGCGTGCCTCAGTCCCGCGCTCACGGTCGCGACCCTAGAAGTCGTGGGC

201 G A V D R T E S G R E C Q R W D L Q H P 220

661 CACCAGCACCCCTTCGAGCCGGGCAAGTTCCTCGACCAAGGTCTGGACGACAACCTATTGC 720
GTGGTCTGTGGGGAAGCTCGGCCCGTTCAAGGAGCTGGTTCAGACCTGCTGTTGATAACG

221 H Q H P F E P G K F L D Q G L D D N Y C 240

721 CGGAATCCTGACGGCTCCGAGCGGCCATGGTGCTACACTACGGATCCGCAGATCGAGCGA 780
GCCTTAGGACTGCCGAGGCTCGCCGGTACCACGATGTGATGCCTAGGCGTCTAGCTCGCT

241 R N P D G S E R P W C Y T T D P Q I E R 260

781 GAGTTCTGTGACCTCCCCGCTGCGGGTCCGAGGCACAGCCCCGCCAAGAGGCCACAAC 840
CTCAAGACACTGGAGGGGGCGACGCCCAGGCTCCGTGTGCGGGCGGTTCTCCGGTGTGA

261 E F C D L P R C G S E A Q P R Q E A T T 280

841 GTCAGCTGCTTCCGCGGGAAGGGTGAGGGCTACCGGGGCACAGCCAATACCACCACTGCG 900
CAGTCGACGAAGGCGCCCTTCCCACTCCCGATGGCCCCGTGTCGGTTATGGTGGTGACGC

281 V S C F R G K G E G Y R G T A N T T T A 300

901 GGCGTACCTTGCCAGCGTTGGGACGCGCAAATCCCGCATCAGCACCGATTTACGCCAGAA 960
CCGCATGGAACGGTCGCAACCCTGCGCGTTTAGGGCGTAGTCGTGGCTAAATGCGGTCTT

301 G V P C Q R W D A Q I P H Q H R F T P E 320

961 AAATACGCGTGCAAAGACCTTCGGGAGAACTTCTGCCGGAACCCCGACGGCTCAGAGGCG 1020
TTTATGCGCACGTTTCTGGAAGCCCTCTTGAAGACGGCCTTGGGGCTGCCGAGTCTCCGC

321 K Y A C K D L R E N F C R N P D G S E A 340

1021 CCCTGGTGCTTCACACTGCGGCCCCGGCATGCGCGCGGCCCTTTTGCTACCAGATCCGGCGT 1080
GGGACCACGAAGTGTGACGCCGGGGCGTACGCGCGCGGAAAACGATGGTCTAGGCCGCA

341 P W C F T L R P G M R A A F C Y Q I R R 360

1081 TGTACAGACGACGTGCGGCCCCAGGACTGCTACCACGGCGCAGGGGAGCAGTACCGCGGC 1140
ACATGTCTGCTGCACGCCGGGGTCTGACGATGGTGCCGCGTCCCCTCGTCATGGCGCCG

361 C T D D V R P Q D C Y H G A G E Q Y R G 380

(continued)

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[illegible]

(continued)

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(continued)

1801 AAGTGTGAGATTGCAGGCTGGGGTGAGACCAAAGGTACGGGTAATGACACAGTCCTAAAT 1860
-----+-----+-----+-----+-----+-----+-----+
TTCACACTCTAACGTCCGACCCCACTCTGGTTTCCATGCCATTACTGTGTCAGGATTTA

601 K C E I A G W G E T K G T G N D T V L N 620

1861 GTGGCCTTTCTGAATGTTATCTCCAACCAGGAGTGTAAACATCAAGCACCGAGGACGTGTG 1920
-----+-----+-----+-----+-----+-----+-----+
CACCGGAAAGACTTACAATAGAGGTTGGTCCTCACAATTGTAGTTCGTGGCTCCTGCACAC

621 V A F L N V I S N Q E C N I K H R G R V 640

1921 CGGGAGAGTGAGATGTGCACTGAGGGACTGTTGGCCCCCTGTGGGGGCCTGTGAGGGTGAC 1980
-----+-----+-----+-----+-----+-----+-----+
GCCCTCTCACTCTACACGTGACTCCCTGACAACCGGGGACACCCCGGACACTCCCACTG

641 R E S E M C T E G L L A P V G A C E G D 660

1981 TACGGGGGCCCCACTTGCCTGCTTTACCCACAAGTCTGGGTCCTGGAAGGAATTATAATC 2040
-----+-----+-----+-----+-----+-----+-----+
ATGCCCCCGGGTGAACGGACGAAATGGGTGTTGACGACCCAGGACCTTCCTTAATATTAG

661 Y G G P L A C F T H N C W V L E G I I I 680

2041 CCCAACCGAGTATGCGCAAGGTCCCGCTGGCCAGCTGTCTTCACGCGTGTCTCTGTGTTT 2100
-----+-----+-----+-----+-----+-----+-----+
GGGTTGGCTCATAACGCGTTCCAGGGCGACCGGTGACAGAAGTGCGCACAGAGACACAAA

681 P N R V C A R S R W P A V F T R V S V F 700

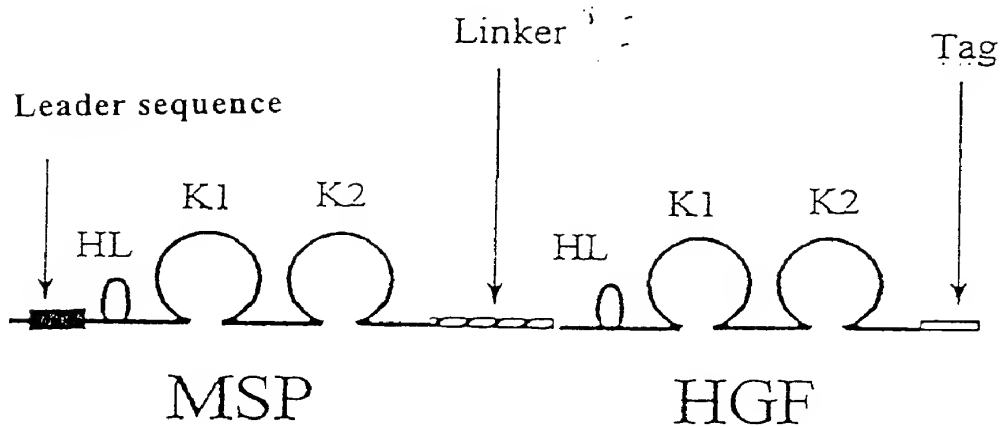
2101 GTGGACTGGATTACAAAGGTCATGAGACTGGGTTAG 2136
-----+-----+-----+-----+-----+-----+-----+
CACCTGACCTAAGTGTTCAGTACTCTGACCCAATC

701 V D W I H K V M R L G * 711

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FIG 2a



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FIG 2b

1 GAATTCCACCATGGGGTGGCTCCCACTCCTGCTGCTTCTGACTCAATGCTTAGGGGTCCC 60
 CTTAAGGTGGTACCCACCGAGGGTGAGGACGACGAAGACTGAGTTACGAATCCCCAGGG
 1 M G W L P L L L L L T Q C L G V P 17
 61 TGGGCAGCGCTCGCCATTGAATGACTTCCAAGTGCTCCGGGGCACAGAGCTACAGCACCT 120
 ACCCGTCGCGAGCGGTAACCTTACTGAAGGTTACAGAGGCCCGGTGTCTCGATGTCTGTGA
 13 G Q R S P L N D F Q V L R G T E L Q H L 37
 121 GCTACATGCGGTGGTGCCCGGGCCTTGGCAGGAGGATGTGGCAGATGCTGAAGAGTGTGC 180
 CGATGTACGCCACCACGGGCCCGGAACCGTCTCTACACCGTCTACGACTTCTCACACG
 38 L H A V V P G P W Q E D V A D A E E C A 57
 181 TGGTTCGCTGTGGGCCCTTAATGGACTGCCGGGCCCTTCCACTACAACGTGAGCAGCCATGG 240
 ACCAGCGACACCCGGAATTACCTGACGGGCCCGGAAGGTGATGTTGCACTCGTCGGTACC
 58 G R C G P L M D C R A F H Y N V S S H G 77
 241 TTGCCAACTGCTGCCATGGACTCAACACTCGCCCCACACGAGGCTGCGGCGTCTTCTGGGCG 300
 AACGGTTGACGACGGTACCTGAGTTGTGAGCGGGGTGTGCTCCGACGCCGCAAGACCCGC
 78 C Q L L P W T Q H S P H T R L R R S G R 97
 301 CTGTGACCTCTTCCAGAAGAAAGACTACGTACGGACCTGCATCATGAACAATGGGGTTGG 360
 GACACTGGAGAAGGTCTTCTTTCTGATGCATGCCTGGACGTAGTACTTGTACCCCAACC
 98 C D L F Q K K D Y V R T C I M N N G V G 117
 361 GTACCGGGGCACCATGGCCACGACCGTGGGTGGCCTGCCCTGCCAGGCTTGGAGCCACAA 420
 CATGGCCCCGTGGTACCGGTGCTGGCACCCACCGGACGGGACGGTCCGAACCTCGGTGTT
 118 Y R G T M A T T V G G L P C Q A W S H K 137
 421 GTTCCCGAATGATCACAAGTACACGCCCACTCTCCGGAATGGCCTGGAAGAGAACTTCTG 480
 CAAGGGCTTACTAGTGTTCATGTGCGGGTGAGAGGCCTTACCGGACCTTCTCTTGAAGAC
 138 F P N D H K Y T P T L R N G L E E N F C 157
 481 CCGTAACCCTGATGGCGACCCCGGAGGTCCTTGGTGCTACACAACAGACCCTGCTGTGCG 540
 GGCATTGGGACTACCGCTGGGGCCTCCAGGAACCACGATGTGTTGTCTGGGACGACACGC
 158 R N P D G D P G G P W C Y T T D P A V R 177

(continued)

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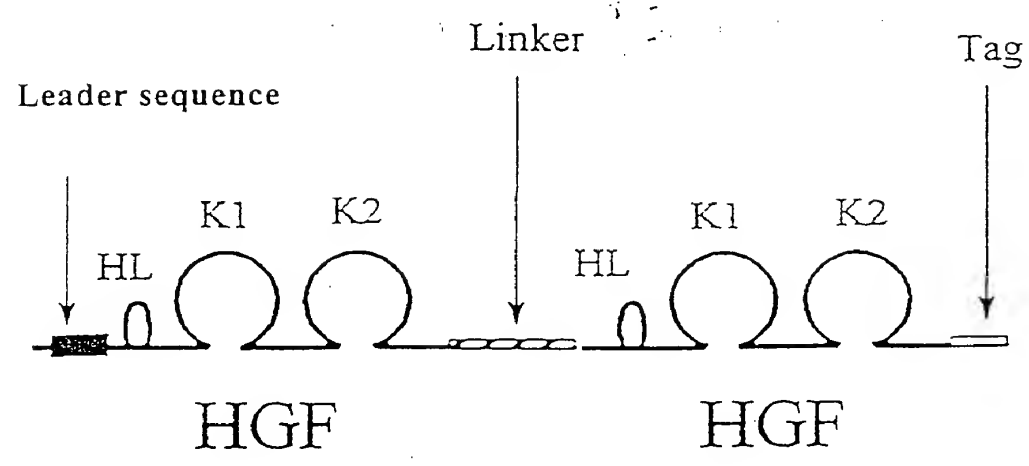
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541 CTTCCAGAGCTGCGGCATCAAATCCTGCCGGGAGGCCGCGTGTGTCTGGTGCAATGGCGA 600
 GAAGGTCTCGACGCCGTAGTTTAGGACGGCCCTCCGGCGCACACAGACCACGTTACCGCT
 178 F Q S C G I K S C R E A A C V W C N G E 197
 601 GGAATACCGCGGCGCGGTAGACCGCACGGAGTCAGGGCGCGAGTGCCAGCGCTGGGATCT 660
 CCTTATGGCGCCGCGCCATCTGGCGTGCCTCAGTCCCGCGCTCACGGTCGCGACCCTAGA
 198 E Y R G A V D R T E S G R E C Q R W D L 217
 661 TCAGCACCCGCACCAGCACCCCTTCGAGCCGGGCAAGTTCCTCGACCAAGGTCTGGACGA 720
 AGTCGTGGGCGTGGTCGTGGGGAAGCTCGGCCCGTTCAAGGAGCTGGTTCCAGACCTGCT
 218 Q H P H Q H P F E P G K F L D Q G L D D 237
 721 CAACTATTGCCGGAATCCTGACGGCTCCGAGCGGCCATGGTGCTACACTACGGATCCGCA 780
 GTTGATAACGGCCCTTAGGACTGCCGAGGCTCGCCGGTACCACGATGTGATGCCTAGGCGT
 238 N Y C R N P D G S E R P W C Y T T D P Q 257
 781 GATCGAGCGAGAGTTCTGTGACCTCCCCCGCTGCGGGTCCGAGGCACAGCCCCGCCTCGA 840
 CTAGCTCGCTCTCAAGACACTGGAGGGGGCGACGCCCAGGCTCCGTGTGCGGGCGGAGCT
 258 I E R E F C D L P R C G S E A Q P R L E 277
 841 GGGCGGTGGCGGTTCTGGTGGCGGTGGCTCCGGCGGTGGCGGTTCTCTAGAGGGACAAAG 900
 CCCGCCACCGCCAAGACCACCGCCACCGAGGCCGCCACCGCCAAGAGATCTCCCTGTTTC
 278 G G G G S G G G S G G G S L E G Q R 297
 901 GAAAAGAAGAAATACAATTCATGAATTCAAAAAATCAGCAAAGACTACCCTAATCAAAAT 960
 CTTTCTTCTTTATGTTAAGTACTTAAGTTTTTTAGTCGTTTCTGATGGGATTAGTTTTA
 298 K R R N T I H E F K K S A K T T L I K I 317
 961 AGATCCAGCACTGAAGATAAAAACCAAAAAGTGAATACTGCAGACCAATGTGCTAATAG 1020
 TCTAGGTGCTGACTTCTATTTTTGGTTTTTTCACTTATGACGTCTGGTTACACGATTATC
 318 D P A L K I K T K K V N T A D Q C A N R 337
 1021 ATGTACTAGGAATAAAGGACTTCCATTCACTTGCAAGGCTTTTGTTTTTGATAAAGCAAG 1080
 TACATGATCCTTATTTTCTGPAAGGTAAGTGAACGTTCCGAAAACAAAACTATTTCGTTT
 338 C T R N K G L P F T C K A F V F D K A R 357
 1081 AAAACAATGCCTCTGGTTCCCTTCAATAGCATGTCAAGTGGAGTGAAAAAGAAATTTGG 1140
 TTTTGTGTACGGAGACCAAGGGGAAGTTATCGTACAGTTCACCTCACTTTTTTCTTAAACC
 358 K Q C L W F P F N S M S S G V K K E F G 377
 1141 CCATGAATTTGACCTCTATGAAAACAAAGACTACATTAGAAACTGCATCATTGGTAAAGG 1200
 GGTACTTAAACTGGAGATACTTTTGTCTTCTGATGTAATCTTTGACGTAGTAACCATTTCC
 378 H E F D L Y E N K D Y I R N C I I G K G 397

(continued)

[illegible]

FIG 3a



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FIG 3b

1 GGATCCGCCAGCCCGTCCAGCAGCACCATGTGGGTGACCAAACCTCCTGCCAGCCCTGCTG 60
-----+-----+-----+-----+-----+-----+
1 CCTAGGCGGTTCGGGCAGGTCGTCTGGTACACCCACTGGTTTGAGGACGGTCGGGACGAC 11

1 M W V T K L L P A L L 11

61 CTGCAGCATGTCCTCCTGCATCTCCTCCTGCTCCCCATCGCCATCCCCTATGCAGAGGGA 120
-----+-----+-----+-----+-----+-----+
12 GACGTCGTACAGGAGGACGTAGAGGAGGACGAGGGGTAGCGGTAGGGGATACGTCTCCCT 31

12 L Q H V L L H L L L L P I A I P Y A E G 31

121 CAAAGGAAAAGAAGAAATACAATTCAATTCAAAAATCAGCAAAGACTACCCTAATC 180
-----+-----+-----+-----+-----+-----+
32 GTTTCCTTTTCTTCTTTATGTTAAGTACTTAAGTTTTTTAGTCGTTTCTGATGGGATTAG 51

32 Q R K R R N T I H E F K K S A K T T L I 51

181 AAATAGATCCAGCACTGAAGATAAAAACCAAAAAAGTGAATACTGCAGACCAATGTGCT 240
-----+-----+-----+-----+-----+-----+
52 TTTTATCTAGGTCGTGACTTCTATTTTTTGGTTTTTTTCACTTATGACGTCTGGTTACACGA 71

52 K I D P A L K I K T K K V N T A D Q C A 71

241 AATAGATGTACTAGGAATAAAGGACTTCCATTCACTTGCAAGGCTTTTGTTTTGTATAAA 300
-----+-----+-----+-----+-----+-----+
72 TTATCTACATGATCCTTATTTTCTGAAGGTAAGTGAACGTTCCGAAAACAAAACCTATTT 91

72 N R C T R N K G L P F T C K A F V F D K 91

301 GCAAGAAAACAATGCCTCTGGTTCCCCTTCAATAGCATGTCAAGTGGAGTGAAAAAAGAA 360
-----+-----+-----+-----+-----+-----+
92 CGTTCTTTTGTGTACGGAGACCAAGGGGAAGTTATCGTACAGTTCACCTCACTTTTTTCTT 111

92 A R K Q C L W F P F N S M S S G V K K E 111

361 TTTGGCCATGAATTTGACCTCTATGAAAACAAAGACTACATTAGAACTGCATCATTGGT 420
-----+-----+-----+-----+-----+-----+
112 AAACCGGTACTTAAACTGGAGATACTTTTGTCTTCTGATGTAATCTTTGACGTAGTAACCA 131

112 F G H E F D L Y E N K D Y I R N C I I G 131

421 AAAGGACGCAGCTACAAGGGAACAGTATCTATCACTAAGAGTGGCATCAAATGTCAGCCC 480
-----+-----+-----+-----+-----+-----+
132 TTTCTTGTGTCGATGTTCCCTTGTCTAGATAGTGATTCTCACCAGTATTTACAGTCGGG 151

132 K G R S Y K G T V S I T K S G I K C Q P 151

481 TGGAGTTCCATGATACACACGAACACAGCTATCGGGGTAAAGACCTACAGGAAACTAC 540
-----+-----+-----+-----+-----+-----+
152 ACCTCAAGGTACTATGGTGTGCTTGTGTGCGATAGCCCCATTTCTGGATGTCCTTTTGATG 171

152 W S S M I P H E H S Y R G K D L Q E N Y 171

(continued)

(continued)

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541 TGTCGAAATCCTCGAGGGGAAGAAGGGGGACCCTGGTGTTCACAAGCAATCCAGAGGTA
ACAGCTTTAGGAGCTCCCCTTCTTCCCCCTGGGACCACAAAGTGTTCGTTAGGTCTCCAT 600

172 C R N P R G E E G G P W C F T S N P E V 191

601 CGCTACGAAGTCTGTGACATTCCCTCAGTGTTCAGAAGTTGAATGCATGACCTGCAATGGG
GCGATGCTTCAGACACTGTAAGGAGTCACAAGTCTTCAACTTACGTACTGGACGTTACCC 660

192 R Y E V C D I P Q C S E V E C M T C N G 211

661 GAGAGTTATCGAGGTCTCATGGATCATAAGAATCAGGCAAGATTTGTCAGCGCTGGGAT
CTCTCAATAGCTCCAGAGTACCTAGTATGTCTTAGTCCGTTCTAAACAGTCGCGACCCTA 720

212 E S Y R G L M D H T E S G K I C Q R W D 231

721 CATCAGACACCACACCGGCACAAATTCTTGCCTGAAAGATATCCCGACAAGGGCTTTGAT
GTAGTCTGTGGTGTGGCCGTGTTAAGAACGGACTTTCTATAGGGCTGTTCCCGAAACTA 780

232 H Q T P H R H K F L P E R Y P D K G F D 251

781 GATAATTATTGCCGCAATCCCGATGGCCAGCCGAGGCCATGGTGCTATACTCTTGACCCT
CTATTAATAACGGCGTTAGGGCTACCGGTCCGGTCCGGTACCACGATATGAGAACTGGGA 840

252 D N Y C R N P D G Q P R P W C Y T L D P 271

841 CACACCCGCTGGGAGTACTGTGCAATTAAACATGCGCTGACAAAGCTTCGGGCGGTGGC
GTGTGGGCGACCCCTCATGACACGTTAATTTTGTACGCGACTGTTTCGAAGCCCGCCACCG 900

272 H T R W E Y C A I K T C A D K A S G G G 291

901 GGTTCGTGGTGGCGGTGGCTCCGGCGGTGGCGGTTCTCTAGAGGGACAAAGGAAAAGAAGA
CCAAGACCACCGCCACCGAGGCCGCCACCGCCAAGAGATCTCCCTGTTTCCTTTCTTCT 960

292 G S G G G G S G G G G S L E G Q R K R R 311

961 AATACAATTCATGAATTCAAAAATCAGCAAAGACTACCCTAATCAAAATAGATCCAGCA
TTATGTTAAGTACTTAAGTTTTTTTAGTCGTTTCTGATGGGATTAGTTTTATCTAGGTCGT 1020

312 N T I H E F K K S A K T T L I K I D P A 331

1021 CTGAAGATAAAAACCAAAAAAGTGAATACTGCAGACCAATGTGCTAATAGATGTACTAGG
GACTTCTATTTTTTGGTTTTTTTCACTTATGACGTCTGGTTACACGATTATCTACATGATCC 1080

332 L K I K T K K V N T A D Q C A N R C T R 351

1081 AATAAAGGACTTCCATTCACTTGCAAGGCTTTTGTGTTTTGATAAAGCAAGAAAACAAATGC
TTATTTCTCTGAAGGTAAGTGAACGTTCCGAAAACAAAACTATTTTCGTTCTTTTGTACG 1140

352 N K G L P F T C K A F V F D K A R K Q C 371

1141 CTCTGGTTCCTTCAATAGCATGTCAAGTGGAGTGAAAAAGAATTTGGCCATGAATTT
GAGACCAAGGGGAAGTTATCGTACAGTTCACCTCACTTTTTTCTTAAACCGGTACTTAAA 1200

372 L W F P F N S M S S G V K K E F G H E F 391

(continued)

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1201	GACCTCTATGAAAACAAAGACTACATTAGAAACTGCATCATTGGGTAAAGGACGCAGCTAC -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ CTGGAGATACTTTTGTCTCTGATGTAATCTTTGACGTAGTAACCATTTCTCTGCGTCGATG	1260
392	D L Y E N K D Y I R N C I I G K G R S Y	411
1261	AAGGGAACAGTATCTATCACTAAGAGTGGCATCAAATGTCAGCCCTGGAGTTCCATGATA -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ TTCCCTTGTCATAGATAGTGATTCTCACCGTAGTTTACAGTCGGGACCTCAAGGTACTAT	1320
412	K G T V S I T K S G I K C Q P W S S M I	431
1321	CCACACGAACACAGCTATCGGGGTAAAGACCTACAGGAAAACCTACTGTCGAAATCCTCGA -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ GGTGTGCTTGTGTGATAGCCCCATTTCTGGATGTCCTTTTGATGACAGCTTTAGGAGCT	1380
432	P H E H S Y R G K D L Q E N Y C R N P R	451
1381	GGGGAAGAAGGGGGACCCTGGTGTTCACAAGCAATCCAGAGGTACGCTACGAAGTCTGT -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ CCCCTTCTTCCCCCTGGGACCACAAAGTGTTCTGTTAGGTCTCCATGCGATGCTTCAGACA	1440
452	G E E G G P W C F T S N P E V R Y E V C	471
1441	GACATTCCTCAGTGTTTCAGAAGTTGAATGCATGACCTGCAATGGGGAGAGTTATCGAGGT -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ CTGTAAGGAGTCACAAGTCTTCAACTTACGTACTGGACGTTACCCCTCTCAATAGCTCCA	1500
472	D I P Q C S E V E C M T C N G E S Y R G -	491
1501	CTCATGGATCATAACAGAATCAGGCAAGATTTGTCAGCGCTGGGATCATCAGACACCACAC -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ GAGTACCTAGTATGTCTTAGTCCGTTCTAAACAGTCGCGACCCTAGTAGTCTGTGGTGTG	1560
492	L M D H T E S G K I C Q R W D H Q T P H	511
1561	CGGCACAAATTCTTGCCCTGAAAGATATCCCGACAAGGGCTTTGATGATAATTATTGCCGC -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ GCCGTGTTTAAAGAACGGACTTTCTATAGGGCTGTTCCCGAAACTACTATTAATAACGGCG	1620
512	R H K F L P E R Y P D K G F D D N Y C R	531
1621	AATCCCGATGGCCAGCCGAGGCCATGGTGCTATACTCTTGACCCTCACACCCGCTGGGAG -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ TTAGGGCTACCGGTCTGGCTCCGGTACCACGATATGAGAACTGGGAGTGTGGGCGACCCCTC	1680
532	N P D G Q P R P W C Y T L D P H T R W E	551
1681	TACTGTGCAATTAAAACATGCGCTGACAAAGCTGACGACGACGACAAACACCACCACCAC -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ ATGACACGTTAATTTTGTACGCGACTGTTTCGACTGCTGCTGCTGTTTGTGGTGGTGGTG	1740
552	Y C A I K T C A D K A D D D D K H H H H	571
1741	CACCACCACTAGGGTCTGAC -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ GTGGTGGTGATCCAGCTG	1759
572	H H H *	574

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Fig 4

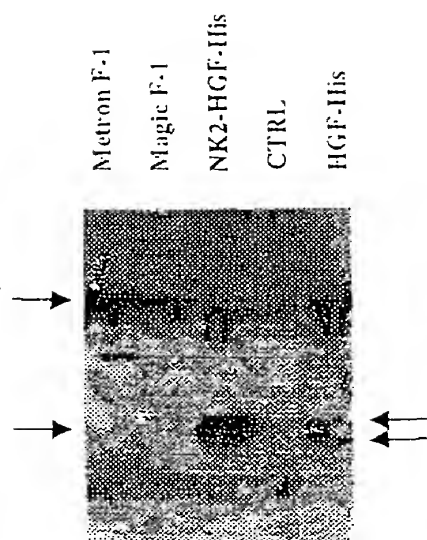


Fig 5A

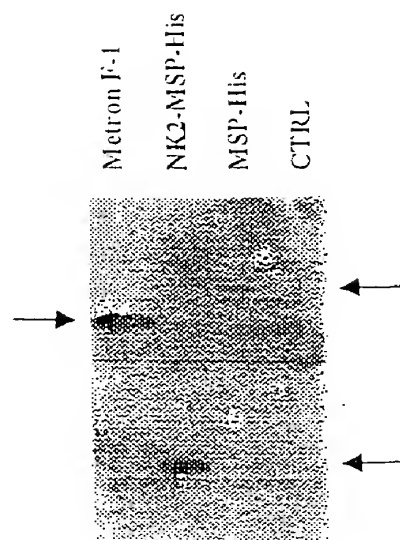


Fig 5B

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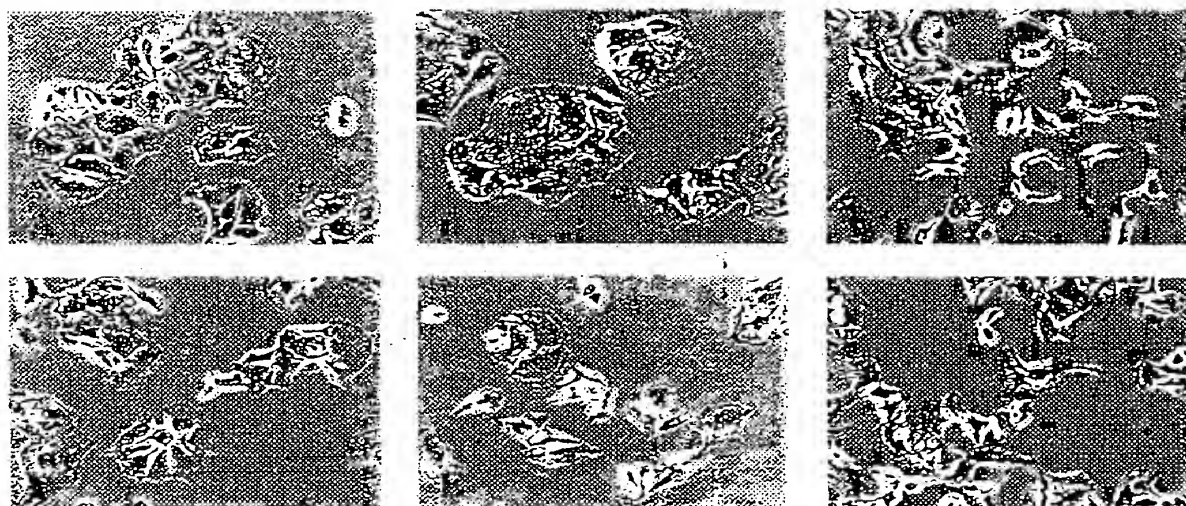


Fig 6

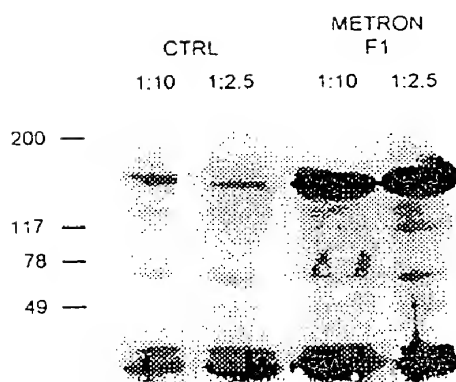


Fig 7

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FIG 8

